

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM
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B512 Dark-eyed Junco *Junco hyemalis*

Family: Emberizidae Order: Passeriformes Class: Aves

Written by: M. Green

Reviewed by: L. Mewaldt

Edited by: R. Duke, E. Beedy

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A common to abundant, breeding and wintering species in California. Breeds in mountains and foothills throughout the state, including higher desert ranges (McCaskie et al. 1979, Garrett and Dunn 1981). Found mostly in forests and woodlands from montane hardwood-conifer forests up through alpine dwarf-shrub habitat of Sierra Nevada. Coastal breeders found in valley foothill hardwood, valley foothill hardwood-conifer, and riparian habitats, as well as in closed-cone pine-cypress, montane hardwood, Douglas-fir, and redwood habitats. In Great Basin and desert ranges, breeders occur in pinyon-juniper. Found in winter in lowland and foothill habitats that provide shrub or tree cover for retreat, and open areas for foraging; frequents residential areas. Winters from sea level up to snow line in mountains. Abundant in fall on Farallon Islands, rare in winter, and common in spring (DeSante and Ainley 1980). On Channel Islands, a common winter resident, but absent in summer (Garrett and Dunn 1981).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Eats insects, spiders, other small arthropods, seeds, and fruits. Mostly feeds on ground, but also gleans in shrubs and small trees, and occasionally sallies after flying insects.

Cover: Trees, shrubs, and ground herbage provide cover.

Reproduction: Nest is an open cup; usually placed on ground near shrub or small tree, often near water. Rarely nests in a tree or shrub, in a woodpecker hole, or in a building (Bent 1968).

Water: Requires water for drinking (Smyth and Coulombe 1971, Davis 1973). Bathes regularly.

Pattern: Uses forests, woodlands, edges for breeding; frequents openings, edges, stream corridors when foraging. Also breeds above timberline near moist alpine meadows. In winter, requires trees and shrubs for cover in addition to open ground for feeding.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Three races breed in California, and other races winter here. The most widespread breeder is *J. h. thurberi* (the "Oregon" race), which nests throughout Sierra Nevada, Cascade Range, and North Coast. High mountain breeders descend both altitudinally and latitudinally to lowlands and foothills (Grinnell and Miller 1944). *J. h. pinosus* (another "Oregon" form) is resident in central coastal mountains. *J. h. caniceps*

(the "gray-headed" race) breeds locally in White and Grapevine Mts., and on Clark Mountain in southeastern California (McCaskie et al. 1979). In winter, *J. h. cismontanus* and *J. h. hyemalis* (the "slate-colored" races) join winter flocks in small numbers; they are more common east of the Sierra Nevada (McCaskie et al. 1979). *J. h. mearnsi* (the "pink-sided" race) and other more northern-breeding "Oregon" forms augment winter flocks. Individuals breeding outside of California mostly are gone by May.

Home Range: Winter foraging range of "slate-colored" junco in Kansas was 5.8 ha (14 ac) for females, and 10.5 ha (26 ac) for males (Fitch 1958). Individuals probably travelled much farther to roosting cover. In Oregon, Gashwiler (1977) reported 14-20 pairs per 40 ha (100 ac) in lodgepole pine, 3-17 pairs per 40 ha (100 ac) in juniper, and 3 pairs per 40 ha (100 ac) in ponderosa pine stands. In northwestern California, Hagar (1960) found 42-54 pairs per 40 ha (100 ac) in recently logged Douglas-fir.

Territory: Eaton (in Bent 1968) estimated territory of "slate-colored" juncos at 0.8 to 1.2 ha (2-3 ac) in New York. Williams (1942) reported interspecific territorial behavior within 8.8 to 11 m (29-36 ft) of a nest in a building.

Reproduction: Breeds from April into August with peak activity in May and June. A monogamous, solitary breeder. Female lays 3-5 eggs (rarely 6) and incubates them 10-13 days. May raise 2 or 3 broods per season. Altricial young cared for by both parents. Young leave nest at 10-13 days and learn to fly several days later (Harrison 1978).

Niche: Nest predators include deer mice, chipmunks, and weasels (Smith and Andersen 1982). Nests and/or adults also probably preyed upon by accipiters, jays, Clark's nutcracker, and other predatory mammals. Forages frequently in flocks with chickadees, bushtits, nuthatches, kinglets, sparrows (Ehrlich et al. 1988). Usually an uncommon cowbird host (Ehrlich et al. 1988). Only 5% of 170 nests or family groups contained cowbirds in the Sierra Nevada (Rothstein et al. 1980, Verner and Ritter 1983, Airola 1986). However, White (1973) reported 36% of nests parasitized at Sagehen Creek in Sierra Co.

Comments: Dark-eyed junco now includes Oregon, gray-headed, slate-colored, and other races formerly considered species (Grinnell and Miller 1944, American Ornithologists' Union 1983). Remsen (1978) listed "gray-headed" junco as a California Species of Special Concern because of its rare and local breeding status along the Nevada border.

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